My thoughts went to my last simulator flight in the RAG, which was my emergency carrier-landing hop.

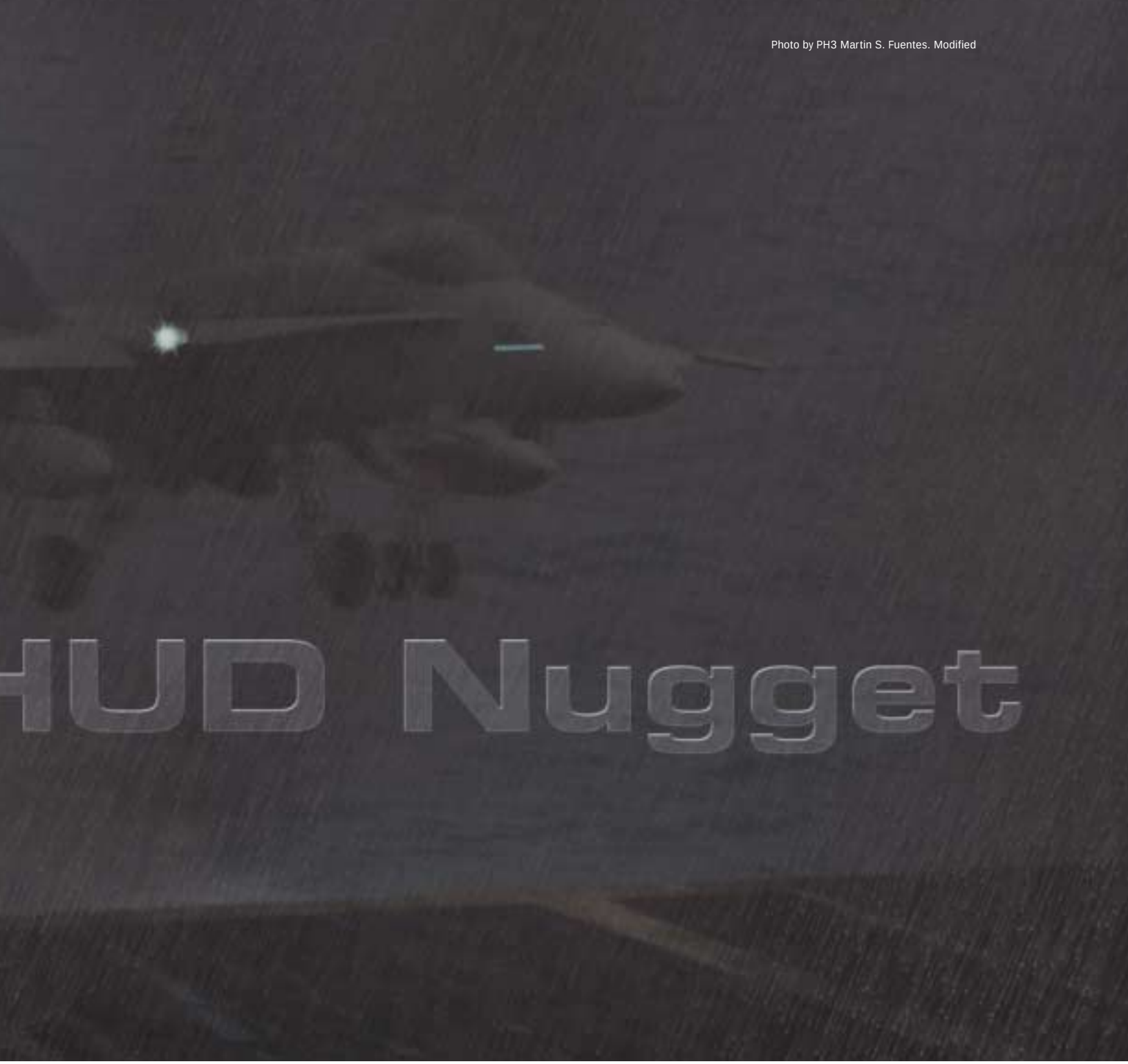
By Lt. Dan Cochran

Blue water in the South China Sea—last launch of the night, and the ship was steaming in a driving rainstorm. The cloud bottoms started at 2,000 feet, and there were layers upon layers through FL300; it was very dark. I was one month out of the RAG, and only four days had passed since our last liberty port. Aside from my day-to-go-night sortie earlier in the day, it had been two weeks since I'd flown.

As I ducked through the hatch leading to the flight deck, my first thought was, "They're gonna make me fly in this?" It was dark, and the flight deck was slippery. I thought my most dangerous task of the night would be getting to my Hornet, which was parked farthest up the bow. My flashlight did not help much, as I kept my head down to keep the rain from my eyes.

After a cursory preflight, the PC opened the canopy long enough for me to get in the cockpit, but, in the time it took to jump into the jet, the consoles and instruments got soaked from the downpour. I dried off the displays and continued with the launch. The deck was slick, but I managed to taxi to the catapult. As a part of my ever-solidifying habit patterns, I went through my emergency-catapult-flyaway procedure.

I went into tension, wiped out the controls, and made sure I hadn't popped any flight-control codes. Once assured the jet was ready to fly, I brought up my ADI (gyro) on the right display, flipped the pinkie switch on the outboard throttle, and waited for the cat stroke that would send



me hurtling into the black void at the end of the angle deck.

As I felt the reassuring acceleration of the stroke, my HUD blanked out. I instinctively checked my engine instruments, knowing if they were good, I shouldn't have a problem getting away from the water. My scan went to my right display and the ADI. I rotated to 10 degrees on the ADI and concentrated on keeping my wings level while climbing. It was a few seconds before I remembered to scan the HUD symbology on my left display, and I continued my departure climb.

It wasn't until passing 10,000 feet, and still in the goo, that I radioed my lead to tell him I had lost my HUD on the cat shot and couldn't get it back. I was so preoccupied with troubleshooting I neglected to fly the jet. It wasn't until

passing through 25 degrees nose high, with airspeed rapidly dropping, that I focused on the priority task of aviating. I reevaluated my plan of action, and decided to fly my jet, to get out of the clouds, and then to worry about getting back my HUD.

I broke out and my lead—the CAG operations officer—and I joined at 33,000 feet, trying to stay out of the rising clouds. We broke out the PCLs and started to troubleshoot the problem. Our good crew coordination was a plus. It was all I could do to fly formation and not get vertigo. I concentrated on staying in position, as my lead read the PCL and talked me through recovering my HUD—no success. What now?

We agreed I should penetrate the weather on my lead's wing and have him drop me off on the ball. We started down, and the bright stars quickly were obscured as we descended into the weather. My thoughts went to my last simulator flight in the RAG, which was my emergency carrier-landing hop. I had to fly the no-HUD approach three times because I almost hit the ship on my first two attempts.

At 1,200 feet and eight miles from the ship, we configured for landing. There were no AOA indications in my cockpit. The gear showed three down and locked, and I had an E bracket on my left display but no red chevron. I checked to see if the AOA lights were burned out and discovered I had neither a fast or slow chevron, but the amber donut worked. I told paddles of the possible AOA failure.

At a mile and a half, I saw the lights of the ship appear out the corner of my eye. Lead did a nice job, dropping me off with a centered-ball start, and I transitioned from flying form to flying a good pass. I felt good about the pass until, suddenly, the waveoff lights illuminated, and I heard paddles' frustrated call, "Wave off, foul deck."

As I climbed away from the carrier, I spied my flight lead in perfect position at my 10 o'clock. I still had fuel for two more looks before I would have to visit the tanker. We flew around the bolter pattern. Again, at three-quarters of a mile, I transitioned from form flying to ball flying. The transition was too much for me; somewhere in the middle, the ball crept off the top of the lens.

My correction wasn't enough, and I had to call clara as the ball went off the top of the lens. The LSOs told me to make an easy correction and to keep it coming. My correction wasn't too easy, and I slammed down before the 1-wire with AB fully engaged. My head flew forward, and it felt like I was riding my nosewheel down the deck as I felt all four wires pass beneath me. I was airborne again! My heart sank as I realized, even after that horrible pass, I had to bring it around for another attempt.

After assuring the tower my hook was down, I decided I needed to fly the pattern myself, so my lead turned downwind without me. Practicing my new scan during the circle around the boat turned out to be the right call. It took me a minute or so to cool down and to get it back together. We were blue-water ops, and I didn't want to do anymore no-HUD passes.

For the third pass, I was on my own. Although I was turned in early, I still got a good start, which gave me confidence. I concentrated on keeping a better energy package and got aboard without as much terror as the prior pass.

I never was happier to get out of a jet in one piece. I learned a lot that night. All aviators are taught to aviate, navigate, communicate, and to prioritize tasks. Despite looking at the display after my HUD failed on the cat stroke, I did get safely airborne. However, rather than continue to fly away from the water on a black night, I elected to troubleshoot. Fortunately, I wound up in a 25-degree, nose-up attitude, rather than the other direction. The result could have been a lot different.

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The other lesson learned focused on crew coordination. My experienced lead did a super job flying me to good starts and being in position to pick me up after two trips down the groove. The formation flying proved to be disorienting for me. I had flown parade to the start and made a disoriented scan transition without the benefit of my primary flight instrument, as I discovered on my third pass. However, it was far easier to practice my degraded instrument scan all the way around the pattern to the start. From there, it was much easier to transition my scan of meatball, lineup, and angle of attack.

Lt. Cochran flies with VFA-195.